

## ON TRACK WITH MDT

In today's environmentally sensitive world, the word recycle is often tossed around like the very materials we're trying to reprocess.

If you look up the word recycle in the *American Heritage Dictionary*, it says that recycle means "to use again, especially to reprocess to use again" or "to recondition and adapt to a new use or function." MDT is committed to recycling in both ways the term is referenced here.

One of the most obvious ways MDT recycles is by milling asphalt and reprocessing it to use again. This is known as Recycled Asphalt Pavement, or RAP, and provides a significant savings to taxpayers and the environment because the material no longer has to be landfilled.

After several years of working with RAP, we've found that both a hot and a cold mix work well, depending on the application.

Traditionally, MDT has used a hot plant mix when applying more than one lift or layer of asphalt to a substantial stretch of roadway. The RAP is incorporated in to the mix for one of the bottom layers, with a virgin plant mix being used for the final lift.

Another way to use RAP is in a cold application, where we inject the millings with a liquid rejuvenator and lay them down using a road grader or blade. This is commonly referred to as a blade patch and works well when doing a repair job on a smaller section of road.

For those wondering whether the use of RAP makes much difference, I hope the following figures will be helpful. They reflect the dollar amount of RAP we've used for each of the last four calendar years:

2000- \$3,434,054  
2001- \$3,188,154  
2002- \$1,574,041  
2003- \$1,953,629

And that's not all MDT is doing. In fact, the recycling efforts underway throughout MDT are far too numerous to detail here – but I do want to take a moment to highlight a few more.

Anyone driving Montana's roads in the winter knows that MDT has a substantial fleet of snowplows that our maintenance folks use to keep our highways passable. But did you know that over 1/3 of our fleet (150 of 440 tandem trucks) is equipped with a Cummins Centinel Advanced Oil Management System that enables these trucks to "recycle" their oil and go anywhere from 100,000 to 525,000 miles between oil changes?

The Centinel device is really quite remarkable. It operates on the engine's duty cycle by removing a small amount of used oil from the engine and sending it to the fuel tank. The used oil is then blended with the fuel and burned during normal combustion. Simultaneously, Centinel adds the same amount of new oil from a make-up tank to the engine. The system, which has been on the market for several years, eliminates the need for oil changes every 3,000 miles and gets rid of the barrels of used oil that are so costly to dispose of.

If that idea intrigues you, so will the prospect of a mobile glass pulverizer that is being delivered to Montana shortly.

The pulverizer is the result of a cooperative effort among several public and private entities, including the Department of Environmental Quality and Headwaters Recycling Cooperative, the lead agencies, as well as MDT, Yellowstone National Park, Montana Solid Waste Contractors Association, Glacier National Park, Flathead County Solid Waste District, Lake County Solid Waste District, City of Bozeman, Confederated Salish & Kootenai Tribes, Recycle MT, Montana Association of Counties (MACO), Jackson Wyoming Recycling Center, City of Great Falls, MT Public Interest Research Group, and the Blackfeet Nation. MDT is participating because we want to find innovative methods for reusing materials in this state, and using appropriately pulverized glass cullet in our road bases will bring us one step closer to that goal.

As these examples show, MDT is thinking outside the box at every turn. Doing so is key to staying “on track” with the future of our great state.

Dave Galt  
Director